Massachusetts Year 2008 Integrated List of Waters

Responses to Public Comments Pertaining to the Proposed Listing of the Condition of Massachusetts' Waters Pursuant to Sections 303(d) and 305(b) of the Clean Water Act

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Introduction

This report summarizes and presents responses to the comments received on the *Proposed Massachusetts Year 2008 Integrated List of Waters* that was prepared by the Massachusetts Department of Environmental Protection (MassDEP) in fulfillment of reporting requirements of sections 305(b) (Summary of Water Quality Report) and 303(d) (List of Impaired Waters) of the Clean Water Act (CWA).

The integrated list format provides the current status of all previously assessed waters in a single multi-part list. Each waterbody or segment thereof is placed in one of the following five categories:

1) Unimpaired and not threatened for all designated uses;
2) Unimpaired for some uses and not assessed for others;
3) Insufficient information to make assessments for any uses;
4) Impaired or threatened for one or more uses but not requiring the calculation of a Total Maximum Daily Load (TMDL); or
5) Impaired or threatened for one or more uses and requiring a TMDL.

Thus, the waters listed in Category 5 are the 303(d) List and, as such, are reviewed and approved by the EPA. The remaining four categories are submitted in fulfillment of the requirements under § 305(b).

The availability for public review and comment of the *Proposed Massachusetts Year 2008 Integrated List of Waters* was noticed in the April 23, 2008 edition of the Massachusetts Environmental Monitor, was posted with the proposed integrated list on the MassDEP web site, and was provided directly to over fifty different watershed associations and other interested parties. Copies of the document were available from the Division of Watershed Management's Watershed Planning Program office in Worcester. The public comment period ended on June 6, 2008.

This document summarizes and provides responses to all comments received on the *Proposed Massachusetts Year 2008 Integrated List of Waters*. In most cases, the comments are reprinted here in their entirety; however, some of the longer comment letters were excerpted or paraphrased, and some comments were edited slightly to conform to the format adopted for this document. A final version of the *Massachusetts Year 2008 Integrated List of Waters*, incorporating the comments and responses presented here, will be prepared and submitted to the EPA for final approval of the 303(d) List (i.e., Category 5). The following table presents a list of those who submitted comments and the pages on which they appear in this document.

Responses to Comments on *Proposed Massachusetts Year 2008 Integrated List of Waters*

1) The Coalition for Buzzards Bay

(As an introduction, the Coalition for Buzzards Bay's letter stated: "Please accept the following as The Coalition for Buzzards Bay ("Coalition's") formal request to include additional embayments as Category 5 waters on the Department of Environmental Protection's ("DEP's") proposed Massachusetts Year 2008 Integrated List of Waters. The Coalition is a non-profit membership organization dedicated to the restoration, protection, and sustainable use and enjoyment of Buzzards Bay and its watershed. We represent more than 5,100 individuals, families, organizations and businesses in southeastern Massachusetts who are committed to maintaining the health and ecological vitality of the Bay.

Pursuant to §303(d) of the Clean Water Act, each state shall identify those waters within its boundaries for which the effluent limitations are not stringent enough to maintain water quality standards applicable to such waters. 33 USC §1313(d)(1)(A). Furthermore, Federal regulations dictate that in promulgating the 303(d) list the state shall assemble and evaluate all existing and readily available water quality-related data and information. Such information includes, but is not limited to, waters for which water quality problems have been reported by local, state, or federal agencies; members of the public; or academic institutions. These organizations and groups should be actively solicited for research they may be conducting or reporting. 40 CFR 130.7(b)(5)(iii). As a membership supported organization, it is under this legal framework that The Coalition submits this report and request.

The Coalition's 303(d) submittal substantially conforms to the DEP Data Submittal Guidelines in the Monitoring Method Guidance document CN 0.71 (September 2004) as well as the Recommended Content of Data Report Submittals Monitoring Method Guidance CN 0.74 (November, 2006). The Coalition notes that the DEP Data Submittal Guidelines are recommended guidelines and are intended to serve as guidance in order to help evaluate the accuracy, precision and representativeness of the data and are not intended to serve as regulations or requirements. Therefore, The Coalition expects that if DEP finds additional information necessary, they will present The Coalition with an opportunity to comply".

In addition to this introductory letter, the Coalition submitted a report entitled: "Request to Include Inner Sippican Harbor, Inner Aucoot Cove, Wild Harbor and Wild Harbor River as Category 5 Waters on the 2008 Integrated List of Waters".)

Comment: Based on the Coalition's water quality monitoring data, which meets the DEP's and EPA's reliability requirements as discussed above and detailed below, The Coalition requests that the following waters, classified as SA waters pursuant to 314 CMR 4.00, be added to the Commonwealth of Massachusetts' 303(d) list of Category 5 waters requiring a TMDL for nutrients.

Aucoot Cove (Inner)	Marion/Mattapoisett
Sippican Harbor (Inner)	Marion
Wild Harbor River	Falmouth
Wild Harbor	Falmouth

The Massachusetts Surface Water Quality Standards for Class SA waters identify these waters as excellent habitat for fish, other aquatic life and wildlife and for primary and secondary contact recreation. The standards also clearly state that these waters shall have excellent aesthetic value (314 CMR 4.05(4)(a)), have dissolved oxygen levels not below 6.0mg/l (314 CMR 4.05(4)(a)(1)(a)) requiring that natural seasonal and daily variations above this level be maintained (314 CMR 4.05(4)(a)(1)(b)). The following submittal demonstrates that the four waterbodies listed above fall short of meeting these Massachusetts Surface Water Quality Standards.

The Coalition submits dissolved oxygen data (concentration and saturation), chlorophyll data, and total nitrogen data in both graphic presentation as well as the quality-assured raw data. The Coalition notes

that the Division of Watershed Management is interested in the quality assured raw data pursuant to the guidance in Monitoring Method Guidance CN 0.74 (November, 2006) and this is the data provided herein. Furthermore, this data was collected consistent with the 1996, 2001, and 2006 approved QAPP. Together, this data clearly supports the listing of Inner Aucoot Cove, Inner Sippican Harbor, Wild Harbor River and Wild Harbor.

Response: The MassDEP carefully reviewed the Buzzards Bay Coalition's comment letter and accompanying documents that provide updated data and information on the four waterbodies for which the Coalition requested additions to the 303(d)-List. Based on this review, the MassDEP acknowledges that Inner Aucoot Cove, a portion of Sippican Harbor and Wild Harbor River all exhibit evidence of nutrient enrichment causing impairment to the designated aquatic life use of those waters. The MassDEP did not, however, find compelling evidence to support the Coalition's contention that nutrient enrichment is leading to water quality standards violations in Wild Harbor and, therefore, will not list "nutrients" or related impairments to this water body at this time. It will, however, remain listed as impaired by "pathogens". The decision to not list nutrients was, in part, due to uncertainties with respect to the representativeness of the sampling station locations and their applicability to the Harbor as a whole. Nonetheless, the MassDEP will make the following changes to the *Massachusetts Year 2008 Integrated List of Waters.* New segments will be created for "Inner Aucoot Cove", "Inner Sippican Harbor" and the "Wild Harbor River" and all three will be placed in Category 5 with their associated impairments, as indicated below:

Inner Aucoot Cove – "Nitrogen (Total)", "Oxygen, Dissolved", "Nutrient/Eutrophication Biological Indicators", "Fecal Coliform"

Inner Sippican Harbor – "Nitrogen (Total)", "Nutrient/Eutrophication Biological Indicators", "Other Habitat Alterations", "Fecal Coliform"

Wild Harbor River – "Nutrient/Eutrophication Biological Indicators", "Fecal Coliform"

2) Charles River Watershed Association

(By way of introduction, the CRWA wrote: "The Charles River Watershed Association (CRWA) is pleased to have an opportunity to review MA DEP's Proposed Year 2008 Integrated List of Waters for the Charles River watershed. CRWA's comments on the list are based on our Upper/Middle Charles TMDL and the Find It and Fix It (FIFI) programs which provide the most recent measurements of water quality and flow in the Charles River watershed. The Find It and Fix It project is a comprehensive three-year project aimed at identifying sources of non-point source pollution and working with communities to fix the problems.

Key components of the Upper/Middle TMDL project were conducted from 2002 to 2005 and included water quality and flow monitoring in the upper Charles River and tributaries. Nine impoundments were also surveyed for water depth, sediment depth, and aquatic plants. Data were reported in the Phase I and Phase II/III reports. The FIFI project results are currently available online at www.crwa.org/projects/METwMyRWA/METFF.html and cover the 2006-2008 period".)

Comment: CRWA suggests that MassDEP justify when a segment pollutant moves from a higher category to a lower category, especially when the pollutant moves from a category 5 ("Requiring a TMDL") to another lower category. These types of changes cover the following categories:

Category 5 deleted (many segments listed with "Metals")
Change from a 5 to lower category
Change to a level 3 from any other category (assessed previously at some time)

A comment field in the tables could provide the rational for these types of changes.

Response: The MassDEP is considering the addition of a table that briefly summarizes the rationale for making the changes that affect the 303(d) List (i.e., Category 5). However, the Integrated List is not the preferred document for presenting the rationale for placing waters in the various categories of the list. Instead, the basis for listing individual waterbodies is documented in the *Charles River Watershed 2002-2006 Water Quality Assessment Report* that can be found on the MassDEP's website at http://mass.gov/dep/water/resources/wqassess.htm. In fact, many of the questions and comments raised in the CRWA's comment letter are addressed in the assessment report. As explained in the 2008 Integrated List document, the MassDEP's watershed assessment reports present for each segment or "assessment unit" (AU) a summary of all existing and readily available data and information pertaining to that AU and, if sufficient information exists, a determination with regard to whether or not individual designated uses are supported. The MassDEP views the preparation of watershed assessment reports as the ideal way to summarize what is known about the status of the water resources in each watershed and to make the assessment and listing process as transparent as possible to the EPA and the general public. As such, the watershed reports are also considered a fundamental element of Massachusetts' submittal to the EPA under Section 305(b) of the CWA.

Comment: New river segments should be added for Godfrey Brook and Canterbury Brook – no segments currently exist for these two tributaries.

Response: The Integrated List is not a complete inventory of all of the surface waters in the Commonwealth, nor is it intended to be. Waterbodies, such as Godfrey and Canterbury brooks, that have never been assessed by the MassDEP do not appear anywhere on the list because resources are unavailable to input the entire inventory of surface waters into the database where assessments are stored. New waters are only added to the list as assessments are completed for those waters for the first time. Nonetheless, waters that do not appear in any category of the list are, by definition, Category 3 ("unassessed") waters.

Comment: Mine Brook Pond was listed in 2006 but the segment is completely missing in the 2008 list.

Response: Mine Brook Pond is discussed in the *Charles River Watershed 2002-2006 Water Quality Assessment Report* (p. 30). The pond is now considered a run-of-the-river impoundment and is assessed as part of Mine Brook (segment MA72-14). Impairments historically associated with Mine Brook Pond were mapped to "Habitat assessment (streams)", indicating habitat impairment related to sedimentation and the lack of riparian vegetation.

Comment: "Chloride" is used only for Sawmill Brook. Why is just this segment listed and what is the chloride criteria that was used?

Response: There is no numerical standard for chloride in the Massachusetts Surface Water Quality Standards so a decision to list "chloride" as a cause of impairment, or stressor, was based on "best professional judgment". In this particular case, chloride values from Sawmill Brook were among the highest obtained during MassDEP's 1997 water quality surveys in the Charles River Watershed and this stressor appeared as "Other inorganics" on 303(d) lists from 2002-2006 before being mapped over to "chloride" in 2008 (see *Charles River Watershed 1997/1998 Water Quality Assessment Report* at http://mass.gov/dep/water/resources/wqassess.htm). Although the original data are now over ten years old, the EPA requires that the stressor remain on the 303(d) List until a TMDL is completed, or new data become available that demonstrate that chloride is no longer impairing Sawmill Brook.

Comment: "Nutrients" has frequently been re-mapped as "Phosphorus". What is the phosphorus criteria that was used?

Response: There are no numerical standards for nutrients in the Massachusetts Surface Water Quality Standards and currently MassDEP does not place waters on the 303(d) list solely on the basis of nutrient concentration data. Furthermore, no specific phosphorus criterion has been consistently applied in the past when assessing and listing Massachusetts' waters. Generally, waters were added to the 303(d) List if they exhibited evidence of eutrophic conditions, such as wide ranges in dissolved oxygen concentration,

high chlorophyll levels or algal or plant "bloom" conditions resulting in use impairment. Sometimes this evidence would lead to the assignment of "nutrients" as a cause of impairment without actually defining an unacceptable concentration of nitrogen or phosphorus. In rarer instances the impairment of some waters may have been attributed to "nutrients" without any chemical nutrient data at all. Nevertheless, use of EPA's new Assessment Database (ADB) necessitates the mapping of the general term "nutrients" to a specific plant nutrient such as "phosphorus" if chemical data support such a decision, or to "Nutrient/Eutrophication Biological Indicators", "Excess Algal growth", or other causes, depending on the kind of information available to make the assessment. A table summarizing how causes from the Water Body System were mapped to the Assessment Database is presented in the introductory section of the integrated list document.

Comment: "Enterococcus" is used only for Laundry Brook. Other pathogen segments are all listed for "Escherichia Coli" (EC) or "Fecal Coliform" (FC). What does this mean for this segment or is this just an error?

Response: A detailed assessment of the unnamed tributary locally known as "Laundry Brook" (segment MA72-30) can be found in the *Charles River Watershed 2002-2006 Water Quality Assessment Report* (p. 119). Primary and secondary contact recreational uses were assessed using both E. coli data provided by the EPA and Enterococcus data collected by the USGS. Both uses were determined to be impaired. A *Total Maximum Daily Load for Pathogens within the Charles River Watershed*, approved by the EPA on May 22, 2007, was focused on the management of these bacterial indicators.

Comment: "DDT" is new in some segments that were not previous listed as "Pesticides". Were these segments newly assessed for DDT or is this an incorrect mapping from "Priority Organics"?

Response: The addition of "DDT" as a cause of impairment of the fish consumption use was based on new public health advisories issued by the Massachusetts Department of Public Health. Please refer to the *Charles River Watershed 2002-2006 Water Quality Assessment Report* for details pertaining to these advisories.

Comment: "Noxious Plants" is frequently remapped to "Algae". In many cases "Noxious Plants" or "Macrophytes" should remain or specifically list the plant species. Many of the nine Upper Charles impoundments (like Milford Pond, Box Pond, N. Bellingham Dam, Caryville Dam, S. Natick Dam and Cochrane Dam) were mapped for macrophyte species (including exotics) and areal extent in the Upper/Middle TMDL.

Response: For listing cycles up to and including 2002, MassDEP stored assessments in EPA's Water Body System (WBS). MassDEP analysts could select from a list of approximately 30 pre-existing "causes" available from the WBS program. One of those causes, "noxious aquatic plants" was used to refer to algae blooms and/or the prolific, nutrient-enhanced growth of macrophytes. Now, however, new ADB cause codes distinguish between "algae" and "macrophytes", and these specific causes were applied when making new assessments if adequate data and information were available to do so. Even so, ADB codes are not provided for individual plant species. That level of detail, if available at all, can only be found in the *Charles River Watershed 2002-2006 Water Quality Assessment Report* or appended technical memoranda. Nevertheless, WBS cause codes pertaining to previously assessed waters for which no new data and information were available, were mapped to the new ADB causes following the careful review of former assessment reports, field sheets or other records. In doing so, efforts were made to determine whether "noxious aquatic plants" referred to algae, macrophytes or both.

Comment: "Organic Enrichment (Sewage) Biological Indicators" is sometimes used when there is no treatment plant in drainage area (see Trout Brook and possibly Fuller Brook). In case of Trout Brook, there is no corresponding "Fecal Coliform" pollutant, which you would expect if there was a sewage leak. In addition, why is this pollutant used downstream of the Milford WWTF but not downstream of the CRPCD outfall (Populatic Pond and the reach downstream of the Populatic Pond) or downstream of the Medfield WWTF?

Response: MassDEP concurs that it is inappropriate to apply the ADB cause code "Organic Enrichment (Sewage) Biological Indicators" to Trout and Fuller brooks and that this was done so in error in the *Proposed Massachusetts Year 2008 Integrated List of Waters.* This stressor will be eliminated from both brooks and replaced by the more appropriate cause "Nutrient/Eutrophication Biological Indicators". ADB cause codes are selected as part of the assessment process based on the kinds of data and information available for each segment or assessment unit (AU). While it would not be wrong to apply the less specific cause code "Organic Enrichment (Sewage) Biological Indicators" to the segment downstream from the CRPCD and Medfield wastewater treatment facilities (i.e., MA72-05), the combination of such cause codes as "Nutrient/Eutrophication Biological Indicators", "Oxygen, Dissolved" and "Aquatic Macroinvertebrate Bioassessments" was deemed more applicable to this particular segment.

Comment: "Debris/Floatables/Trash" is only used for South Meadow Brook. There are many other segments in the Lower Charles where this would be applicable. For instance, Beaver Brook, in Waltham, has extensive trash along the river banks.

Response: Unfortunately, in a populated state like Massachusetts, trash and litter may be found almost anywhere and waterbodies are adversely affected, from time to time, by the careless release of rubbish and solid wastes. Nonetheless, while the MassDEP applauds the efforts of individuals and organizations that sponsor clean-up events to remove trash and other discarded objects from affected waters, the problem of dumping refuse in waterbodies is not effectively managed through the water quality management strategies authorized by the CWA such as the TMDL or surface water permitting (i.e., NPDES) programs. Therefore, from an assessment and listing point of view, the aesthetic use of the waterbody may be considered "impaired" where glaring abuses are observed that directly affect the water column and not just the streambanks. These occurrences are randomly encountered in the field and no effort is made to evaluate the magnitude or extent of trash-affected waters on a watershed or state-wide scale.

Comment: "pH" should be added for segment MA72-01 (Headwaters to Dilla Street). "Low Flow Alteration" has already been added in 2008 for this segment. The segment is difficult to monitor as it is often dry but CRWA has made measurements of pH of less than 6 when there is water in the streambed.

Response: Segment MA72-01 appears in Category 5 due to low dissolved oxygen and mercury in fish tissue. The non-pollutants "Low flow alterations" and "Other flow regime alterations" are also applied to this segment. The paucity of unqualified pH data and the uncertainty with respect to the source of the potentially low pH values (i.e., naturally occurring vs. anthropogenic) led to the decision not to list pH as a cause of impairment in this segment.

Comment: "Low Flow Alteration" should be added for segment MA72-02 (Dilla Street to Milford WWTP, Hopedale) and Hopping Brook. "Low Flow Alteration" has been added for segment MA72-01 and the same conditions apply to the downstream reach. The mainstem of the Charles River does not have adequate flow until after the discharge from the Milford WWTF. In a groundwater study (Eggleston, 2003) of the Upper Charles River, USGS estimated baseflows for Hopping Brook (control points HB1 and HB2) and determined that summer baseflows under average climatic conditions are between 0.14-0.15 cfsm, much below the recommended Aquatic Base Flow of 0.5 cfsm from U.S. Fish and Wildlife Service.

Response: Examination of the *Charles River Watershed 2002-2006 Water Quality Assessment Report* will reveal that segment MA72-02 was shortened to exclude Cedar Swamp Pond and is now MA72-33. Nonetheless, there are no enforceable flow standards in effect for Massachusetts' rivers, and the USFWS baseflow alluded to in this comment is only a recommended guideline. The MassDEP did encounter low-flow conditions in the most upstream reach (MA 72-01) of the Charles River, similar to those described by the CRWA, during its 2002 monitoring program. The MassDEP did not, however, find the evidence strong enough to confirm that the next segment downstream (MA 72-33) is impaired by flow alterations. Likewise, although low-flow conditions have been documented in Hopping Brook, especially during times of drought, the extent to which low-flow conditions contribute to the impairment of designated uses, such as the support of aquatic life, remains uncertain at this time. Quoting from the study cited above (Eggleston 2003), "although human water use contributes to the problem of low summertime streamflows,

human water use is not the only, or even the primary, cause of low flows in the basin". Due to the lack of enforceable minimum flow standards, the unconfirmed extent to which low flows are actually contributing to use-impairment, and the uncertainty that exists with respect to natural versus anthropogenic contributions to low-flow conditions in Hopping Brook, the stressor "flow alterations" will not be added to this segment at this time. The MassDEP does recommend, however, that continued research efforts be aimed at developing water and wastewater management alternatives for the Upper Charles Basin that will meet future demands for public water supply while minimizing deleterious impacts to surface waters.

Comment: "Flow Alteration" should be added for Fuller Brook. The flow in this tributary was monitored in the Upper/Middle TMDL and is documented as being extremely flashy compared to other similar watersheds, probably because it is highly channelized.

Response: As discussed in the *Charles River Watershed 2002-2006 Water Quality Assessment Report*, MassDEP reviewed streamflow measurements made by the CRWA during the period July 2002 – March 2006 but could not confirm that "flow alteration" was a cause of impairment of Fuller Brook. Other habitat-related impairments were documented in the assessment and "physical habitat substrate alterations" and "sedimentation/siltation" both appear as stressors to this segment in the assessment report and the Integrated List.

Comment: "Metals" should be added to Waban Brook (from Morses Pond to the confluence with the Charles River). That segment has a lead chromate contamination problem in the sediments.

Response: Lead and chromium originating from the Paintshop Pond (Wellesley) waste site have contributed to the contamination of sediment in the Waban Brook watershed. However, "metals" was not listed as a stressor to Waban Brook because no standards have been adopted for aqueous sediments and it is difficult to determine the extent to which the sediment metal concentrations are impairing the designated uses of this waterbody. For this reason site remediation was preferred over the derivation of TMDLs for restoring the Waban Brook watershed. In 2002 EPA completed the decontamination of the culvert connecting Paintshop Pond to Morses Pond. Additional waters affected by the paint factory site (i.e., Paintshop Pond and lower Waban Brook) are the focus of ongoing clean-up operations undertaken by Wellesley College under the supervision of the MassDEP's Bureau of Wastesite Clean-up (BWSC).

Comment: "Phosphorus" should be added as a pollutant for Chicken Brook, Hopping Brook, and Bogastow Brook (sampled in the TMDL) and Canterbury Brook and Sawins Brook (sampled in FIFI). The results for the lowest segment of these tributaries is present below:

Site Name	**Number Samples**	**Mean TP (mg/L)**	**Max TP (mg/L)**
Chicken Brook	6	0.08	0.18
Hopping Brook	6	0.05	0.08
Bogastow Brook	6	0.07	0.10
Fuller Brook	3	0.28	0.60
Canterbury Brook	2	0.14	0.16

Response: There are currently no numerical standards for nutrients in the Massachusetts Surface Water Quality Standards and the MassDEP does not usually place waters on the 303(d) List solely on the basis of nutrient concentration data. On a case-by-case basis the MassDEP will add waters to the 303(d) List based on clear evidence of eutrophic conditions, such as wide ranges in dissolved oxygen concentration, elevated chlorophyll values or biological surveys (in combination with nutrient concentrations) that reveal algae or plant "bloom" conditions. However, nutrient concentrations above normal background levels do not, in and of themselves, constitute use-impairment. When performing the most recent assessment of the Charles River Watershed the MassDEP reviewed existing and readily available data and information available from the CRWA, as well as MassDEP's own water quality and biological data obtained during its 2002 ambient monitoring program. The MassDEP did not find compelling evidence for including "phosphorus" as a pollutant for these waters at this time. The *Charles River Watershed 2002-2006 Water*

Quality Assessment Report should be consulted for a detailed summary of the findings on most of these tributaries.

Comment: "Pathogens" should be added as a pollutant for Chicken Brook and Godfrey Brook (sampled for FC in the TMDL) and Canterbury Brook and Sawins Brook (sampled for EC in FIFI). The results for the lowest segment of these tributaries is present below:

Site Name	**Number Samples**	**Geometric Mean FC/EC (cfu/100 mL)**	**Max FC/EC (cfu/100 mL)**
Chicken Brook (FC)	6	714	5,500
Godfrey Brook (FC)	3	1,339	8,000
Canterbury Brook (EC)	4	4,313	22,000
Sawmill Brook (EC)	3	581	8,600

Response: The *Charles River Watershed 2002-2006 Water Quality Assessment Report* should be consulted for a detailed summary of the most recent assessment of these tributaries. Again, readily available data and information submitted by the CRWA, as well as from the MassDEP's 2002 water quality monitoring surveys, were reviewed to determine the status of the recreational use of these streams. Sawins and Sawmill brooks were found to be impaired by *E. coli* and these impairments are addressed by an EPA-approved TMDL. The other tributaries were either found to be supporting their designated recreational uses or there was insufficient data and information for completing an assessment.

Comment: "Fish-Passage Barrier" is only applied to two segments (MA72-07 and MA72-36). There are many other dams in segments above MA72-07 while MA72-36 really does not have any dams (unless the segment is from the upstream side of Watertown Dam to the BU Bridge). There needs to be a more logical way to apply this pollutant.

Response: "Fish-Passage Barrier", like stream discharge and habitat alteration, is not a pollutant and, therefore, is not an impairment that would result in the placement of a waterbody on the 303(d) List. Nonetheless, the decision to cite this impairment for these two Charles River segments was based on a survey of anadromous fish passage in coastal Massachusetts completed by the Massachusetts Division of Marine Fisheries. More information pertaining to this study, which focused only on the lower reaches of the main stem Charles River, is presented in the *Charles River Watershed 2002-2006 Water Quality Assessment Report.* MassDEP acknowledges that barriers to fish passage likely occur in more segments than are indicated by the proposed integrated list. However, the MassDEP did not attempt, as part of the assessment process, to create an exhaustive list of all of the obstructions to fish passage that occur throughout the Charles River Watershed.

Comment: More specific comments on the *2008 Integrated List of Waters* for all the segments in the Charles River watershed are given in an attachment. MA DEP should use these comments to closely review the *Proposed MA 2008 Integrated List of Waters* so that they accurately reflect how well the waters of the Charles River watershed meet their designated uses and water quality standards.

Response: The general tenor of this comment differs little from the CRWA's first comment that requests documentation of the changes made from the 2006 to the 2008 listing cycles. Once again the MassDEP feels compelled to refer to the *Charles River Watershed 2002-2006 Water Quality Assessment Report* for all of the details pertaining to the assessments that informed the most recent listing changes. A Draft version of this report was extensively reviewed by the CRWA and many constructive comments were incorporated into the final document. Most of the questions and comments raised in the CRWA's more recent review of the *Proposed Massachusetts Year 2008 Integrated List of Waters* are addressed in the assessment report. As explained above, the MassDEP is considering the addition of a separate summary table to the final version of the 2008 List that presents only those changes affecting the 303(d) List (i.e., Category 5).

3) Connecticut River Watershed Council

(The comment letter from the CRWC began: "Thank you for the opportunity to comment on the proposed Massachusetts Year 2008 Integrated List of Waters. On behalf the Connecticut River Watershed Council (CRWC) and its members, I submit the following comments. CRWC is a non-profit organization that works to protect the watershed from source to sea. As stewards of this heritage, we celebrate our four-state treasure and collaborate, educate, organize, restore, and intervene to preserve the health of the whole for generations to come. In particular, we are looking forward to the day when the entire length of the Connecticut River will be fishable and swimmable. The 2008 Integrated List finally incorporates MassDEP's water quality assessment data collected in 2003 for the Connecticut River basin. Several listings in the watershed have been modified as a result of the recent data.")

Comment: There are several drinking water supply reservoirs that are listed as Category 3 waters, "no uses assessed." For example, in the Connecticut River watershed, there is Mountain Street Reservoir, Northampton Reservoir, and Tighe Carmody Reservoir. It is surprising to us that data collected by municipalities for their drinking water supplies would not be something MassDEP could use for assessing at least some uses of these water bodies.

Response: The MassDEP does not assess the "Drinking Water Use" for reporting under sections 305(b) and 303(d) of the Clean Water Act. Instead, general guidance on drinking water source protection of both surface water and groundwater sources is provided at http://www.mass.gov/dep/water/drinking.htm. These waters are subject to stringent regulation in accordance with the Massachusetts Drinking Water Regulations. Theoretically, data collected by municipalities from their drinking water supplies could be used to assess other water uses under the Clean Water Act. However, the regulation governing §303(d) that requires states to "assemble and evaluate all existing and readily available water quality-related data and information to develop the § 303(d) list" does not mandate that states use all data and information regardless of the quality or representativeness of that information. In fact, the EPA strongly encourages states to establish minimum data requirements and acceptable criteria for submitting data for consideration for listing. The MassDEP has established minimum criteria for submitting data from external sources based on sound scientific principles and guidance from the EPA. Data can only be considered if they are in a format that can be analyzed and interpreted by the state within a reasonable time frame. The state may elect not to use data and information from external sources if documentation is lacking or incomplete with respect to the appropriateness of using the information to make judgments on use attainability. This may include insufficient information pertaining to sample collection procedures, QA/QC measures, representativeness of sampling sites and events, and whether data were collected under appropriate conditions for comparisons with water quality standards. Public water suppliers typically monitor their finished water (tap water) for constituents that are regulated under the Safe Drinking Water Act and usually do not focus their limited monitoring resources on the analysis of "raw" water from reservoirs. As a result, data from municipal water suppliers are often not suitable for use in making assessments in accordance with the requirements of the Clean Water Act.

Comment: Several water bodies listed in the 2006 Integrated List, some as category 5, are no longer even on the Integrated List. We understand why, for example, Mountain Lake in Chicopee and Upper and Lower Ponds in South Hadley are no longer on the list. But we are not clear why Hulburts Pond, Rubber Thread Pond, and White Reservoir have been eliminated.

Response: All three of these ponds are discussed in the *Connecticut River Watershed 2003 Water Quality Assessment Report (DRAFT)* that can be found on the MassDEP's website at http://mass.gov/dep/water/resources/wqassess.htm. Due to changes in their hydrologic character, Hulburts Pond, Rubber Thread Pond, and White Reservoir are now considered run-of-the-river impoundments and are assessed as part of segments MA34-32 (Mill River Diversion), MA34-15 (Wilton Brook) and MA34-10 (Manhan River), respectively. Impairments historically associated with these ponds were included with the river segments and mapped to the new ADB impairment codes.

Comment: Several water bodies listed as Category 4c waters, "Impairment not Caused by a Pollutant" also have impairments that are caused by a pollutant but have a TMDL prepared. These water bodies seem more appropriate in Category 4a, "TMDL Completed." These include Browning Pond and Quacumquasit Pond in the Chicopee watershed and Leverett Pond and Lake Warner in the Connecticut watershed. These water bodies all have impairments caused by pollutants, as well as having invasive aquatic plants.

Response: This exact comment was addressed in the 2006 public response document. Waters exhibiting impairment for one or more uses are placed in either Category 4 (impaired but not requiring TMDLs) or Category 5 (impaired and requiring one or more TMDLs) in accordance with EPA guidance. Category 4 can be further divided into three sub-categories – 4a, 4b and 4c – depending upon the reason that TMDLs are not needed. Category 4a includes waters for which all of the required TMDL(s) have been completed and approved by the EPA, and no impairments related to non-pollutants exist for those waters. ***Because each segment is listed in only one category***, waters that have approved TMDLs for some pollutants, but not others, are retained in Category 5 until TMDLs are approved for all of the pollutants. Likewise, waters that are impaired by non-pollutants remain in Category 4c even if they also have approved TMDLs for one or more pollutant. In any case, approved TMDLs are indicated by including the control number of the TMDL report and the EPA approval date next to the applicable pollutant irrespective of where (i.e., what category) the segment appears on the list.

Comment: In 2006, US EPA published a study on contaminants in fish tissue in the Connecticut River. The report is found online at http://www.epa.gov/region1/lab/reportsdocuments/ctriverftr2000/index.html. Massachusetts Department of Environmental Protection was listed as a partner in this report. After all this work, it is very disappointing that this report has not been included as a source in the preparation of the 2008 Integrated List. Several fish tissue samples were above EPA's mercury water quality criterion. Even though the river segments used by EPA do not always match up with the river segments listed in the Integrated List, there is enough evidence to suggest that the Connecticut River in Massachusetts, at least in parts, should be listed as being impaired for mercury in fish tissue. This can be covered under the regional TMDL for mercury.

Response: Contrary to what is suggested in this comment, the EPA's final report on the Connecticut River Fish Tissue Contaminant Study (2000) was extensively reviewed as part of the most recent assessment of the Connecticut Watershed assessment which, in turn, formed the basis of the 2008 integrated listing decisions. The following excerpt is taken directly from MassDEP's *Connecticut River Watershed 2003 Water Quality Assessment Report (DRAFT)* (see http://mass.gov/dep/water/resources/wqassess.htm.)

"The Connecticut River Fish Tissue Contaminant Study (2000) was a collaborative federal and multi-state project designed to provide a baseline of tissue contaminant data from several fish species and learn what threat eating these fish poses to other mammals, birds, and fish (Hellyer 2006). This study reached the following conclusions: mercury poses a risk to fish-eating wildlife, DDT homologs (chemical physical, and biological breakdown products of the parent compound) pose a risk to fish-eating birds, coplanar PCBs pose a risk to fish-eating mammals and fish-eating birds, and dioxin constituted a risk to fish-eating wildlife."

A review of results of the study cited above provided insufficient evidence of deleterious affects on in-stream biota. Therefore, four of the five main stem segments of the Connecticut River were assessed as support for the Aquatic Life Use (the fifth segment was impaired due to flow alteration). Nonetheless, an Alert Status was applied to these segments due, in part, to the risk that fish tissue contaminants (including mercury) pose to fish-eating wildlife. The Alert Status is an indication that use impairment may exist but cannot be confirmed from the available data and information. The designation does not result in the waterbody's placement in categories 4 or 5, however, because the use (i.e., Aquatic Life) is currently supported.

Comment: Other than the EPA study, is there recent data that support continuing to list PCBs in fish tissue as one of the impairments for the Connecticut River? If no recent data have been collected, what is the rationale for keeping this listing while de-listing other water bodies for which valid data has expired?

Response: The MassDEP does not delist waterbodies or segments because assessments or supporting data become outdated. The EPA guidance pertaining to Section 303(d) is clear with respect to the removal of waterbodies from the 303(d) List. Waterbodies or applicable segments thereof can be removed when 1) a TMDL is approved by the EPA for that waterbody or segment; 2) a new assessment reveals that the waterbody is now meeting applicable water quality standards or is expected to meet those standards in a reasonable timeframe as the result of implementation of required pollution controls; and 3) when, upon re-examination, the original basis for listing is determined to be flawed. The MassDPH health advisory pertaining to PCBs in fish tissue from the Connecticut River was actually issued in the late 1980's and will remain in place until new data indicate that the health risk associated with fish consumption has decreased to an acceptable level. Until such a time, PCBs in fish tissue must continue to be listed as impairing the fish consumption use whether or not new data are available to support the original listing decision.

Comment: The Connecticut River is no longer being listed as impaired for pathogens in the segment between the VT/NH/MA state line and the Route 10 bridge in Northfield, and for the segment between the confluence with the Deerfield River and the Holyoke Dam. The delisting is most likely because the 2003 assessment indicated that the river was meeting water quality standards for bacteria. While this may be true for the upper stretch, we do not think there is sufficient reason to de-list it in the segment between the Deerfield River and the Holyoke Dam. First, MassDEP data from 2003 at station 04C (Connecticut River upstream of the confluence of the Mill River near the Oxbow, Northampton/Hadley) had one sampling date, 8/6/03, in which three samples from different sides of the river had *E.coli* levels that exceeded the single sample water quality standard of 235 CFU/100mL (450, 250, 410 CFU/100mL). Second, when MassDEP updated the state Water Quality Standards in 2006, the agency insisted on adding the CSO qualifier to this entire segment, three years after collecting the data that now leads to a delisting for pathogens. Third, there are still three active CSOs in Montague and five in Holyoke that discharge into the northern and southern ends of this segment. In the case of Holyoke, the five CSOs added up to an overflow volume of 130.3 million gallons in 2002. There are enough data for the Connecticut River and elsewhere that indicates SOs discharging hundreds of millions of gallons of untreated wastewater contribute to pathogen impairments. This is really a case of "if a tree falls in the forest and no one hears it, did it make a noise?" We believe the Connecticut River between the Deerfield River and the Holyoke Dam continues to be impaired for pathogens in certain areas and we strongly urge you not to delist it.

Response: Following further review of the information presented in this comment, as well as data collected in association with ongoing CSO monitoring and control programs, MassDEP concurs that the decision to remove "pathogens" from the segment between the Deerfield River and the Holyoke Dam (i.e., MA34-04) is not justified at this time. "Escherichia coli" will be listed as a stressor to this segment.

Comment: MassDEP should consider adding a table that shows the rationale for each delisting of segments or pollutant combinations (see Table 3-4 of EPA's *2006 Integrated Report Guidance*).

Response: The MassDEP is considering the addition of a table that summarizes the changes that affect the 303(d) List (i.e., Category 5). However, the rationale for placing waters in the various categories of the multi-part list is embodied in the individual waterbody assessments that are documented in the *Connecticut River Watershed 2003 Water Quality Assessment Report.* A Draft version of this report is available at the MassDEP's website at http://mass.gov/dep/water/resources/wqassess.htm. Many of the questions and comments raised in the CRWC's comment letter are addressed in the assessment report.

Comment: The Category 5 waters in the Millers River watershed need to be updated such that the pollutants described are consistent with the newer terminology. In other words, "priority organics" and "metals" should be made more specific as has been done in other watersheds.

Response: A complete description of MassDEP's implementation of the new Assessment Database (ADB) is presented in the *Proposed Massachusetts Year 2008 Integrated List of Waters* in the section entitled "Assessment Documentation". During the development of the Year 2008 Integrated List, MassDEP initiated the process of populating the ADB with the new assessments completed for the **Charles**,

Connecticut, **Hudson**, **Housatonic** and **Ten Mile** watersheds and the **North Coastal** drainage areas. As part of this process, all segments, *referred to as "assessment units" (AU) in the ADB*, were carefully reviewed, whether or not new data and information were available to make an assessment, to ensure that older WBS "causes" were properly translated or "mapped over" to the new ADB "causes". Only the above mentioned six watersheds were input to the ADB for the 2008 reporting cycle. The remaining watersheds were retained in the Integrated List database with the impaired segments labeled with the WBS "cause" codes. It is the goal of the MassDEP to have these watersheds input to the ADB and converted over to the "newer terminology" for the 2010 reporting cycle.

Comment: MassDEP has made some corrective changes to the listing of river impoundments over the years. However, it is still not apparent why some impoundments are listed separately (Red Bridge Impoundment in the Chicopee watershed) and others aren't listed or have been delisted (Paradise Pond on the Mill River in Northampton is not thought of as a separate water body). At the very least, it would be helpful if MassDEP could add the river name in the description of the impoundments. This has been done in the case of Barton Cove, but not for the Oxbow and Log Pond Cove on the Connecticut River, Lake Warner on the Mill River in Hadley, or Red Bridge Impoundment on the Chicopee River, to name a few.

Response: Historically, many impounded river segments throughout Massachusetts were included in 305(b) assessments and 303(d) lists both as named lakes or ponds (acres) and as river segments (linear miles). This redundancy resulted in the double counting of these water bodies when summing lake acres and river miles for purposes of reporting under sections 305(b) and 303(d). Now, as it progresses through the watershed assessment cycle, the DWM is eliminating those flow-through type lakes that can be assessed as river segments based on their hydrological character. Typically, run-of-the-river impoundments exhibiting detention times of less than 14 days are treated as river segments and their corresponding lake or pond segments are eliminated from the Assessment Database. When practicable, these lake or pond names may be added to the descriptor for the river segment from which they were removed. Nonetheless, impairments historically associated with these lakes and ponds are not lost but are included with the river segments and mapped to the new ADB impairment codes.

Comment: We recommend that any water body listed as a "receiving water" for any NPDES permit in the state should be listed in the Integrated List, even if it is only a Category 3 water. This includes the tributaries receiving discharge water from the Bitzer Fish Hatchery in Montague and the Sunderland Fish Hatchery. It also includes the Turners Falls power canal and the Holyoke canal system. There are also several water bodies receiving heated water covered under the noncontact cooling water generic permit (Coys Brook and Poor Brook in the Chicopee basin, Buttery Brook and Chartley Brook in the Connecticut basin). There are likely others. If it's big enough to discharge waste into, it's a water body MassDEP should acknowledge and assess.

Response: Ideally, all waters would be included in the Integrated List and the omission of waterbodies has nothing to do with their size or perceived importance. Rather, waters missing from all categories of the Integrated List have simply never been assessed by the MassDEP. By definition, however, they are Category 3 (i.e., unassessed) waters. As explained in the integrated list document, the databases used to store assessments were never populated with a file for every surface water or segment thereof in Massachusetts, nor will the new Assessment Database (ADB) likely be populated in that manner. Rather, these databases contain only those segments for which assessments of one or more designated uses were actually completed at one time or another in the past. As assessments are carried out in new waters, these will be added to the ADB resulting in greater representation of Massachusetts' surface waters in future versions of the Integrated List. MassDEP acknowledges that all surface waters could be included whether or not they have ever been assessed. However, the time and resources are currently not available to add all of the surface waters in Massachusetts to the ADB.

Comment: All three other states in our watershed, Connecticut, New Hampshire, and Vermont, prepare their 303d list of impaired water bodies with the following information included in the list: impaired designated use, TMDL priority, and potential source/cause of impairment. Massachusetts does none of this. We recommend that Massachusetts modify its format to include this important information and be more consistent with other New England states.

Response: The MassDEP acknowledges that a segment-by-segment accounting of the impaired designated uses and potential *sources* of impairment is not currently presented in the integrated list document itself, although *causes* of impairment certainly are included for waters appearing in categories 4 and 5. Nonetheless, all of this information is presented in the individual watershed assessment reports that are posted on the MassDEP's website at http://mass.gov/dep/water/resources/wqassess.htm. These reports present, for each segment or "assessment unit" (AU), a summary of all existing and readily available data and information pertaining to that AU and, if sufficient information exists, a determination with regard to whether or not individual designated uses are supported. Also included for each segment is a list of causes and sources of impairment. Prioritization of Massachusetts' waters for TMDL development is discussed, at some length, beginning on p. 27 of the *Proposed Massachusetts Year 2008 Integrated List of Waters*. A key component of the 303(d) listing process is establishing timelines for TMDL development. It is recommended in EPA guidance "that States develop a schedule for establishing TMDLs as expeditiously as practicable." More specifically, states must identify which TMDLs will be developed in each of the two years leading up to the next listing (i.e., 2010), and the approximate number of TMDLs to be derived for each year thereafter. Furthermore "States need not specifically identify each TMDL as high, medium or low priority. Instead the schedule itself can reflect the State's priority ranking." The TMDL schedule is intended to communicate the State's priorities to the public and the EPA and to assist with the allocation of resources to the TMDL development effort. As such the schedule is not subject to approval by the EPA. Details pertaining to the status of TMDL development in Massachusetts, including detailed work plans, can be found under "Restore Degraded Water Quality" at http://www.mass.gov/dep/water/priorities/sggwhome.htm#restore. The MassDEP asserts that this approach to communicating priorities for TMDL development is much more informative than simply placing a "high", "medium" or "low" next to every segment-stressor combination on the 303(d) List. Nonetheless, more consistency with other states may be realized as Massachusetts, along with the other New England states begin to use the ADB and associated reporting elements.

4) Jones River Watershed Association, Mass Audubon, Taunton River Watershed Alliance (combined letter)

Comment: The IWL violates the Clean Water Act, § 303(d) by excluding water bodies impaired by flow alteration. Flow alteration is the second leading cause of the failure of the Nation's waters to meet FCWA goals. EPA's Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to 303(d) and 305(b) of the Clean Water Act, stating that flow alteration is not a "pollutant" constitutes an unlawful interpretation of the CWA. Reduced stream flow (i.e. diminishment of water quantity) can constitute pollution. As stated by the United States Supreme Court,

"Petitioners also assert more generally that the Clean Water Act is only concerned with water "quality," and does not allow the regulation of water "quantity." This is an artificial distinction. In many cases, water quantity is closely related to water quality; a sufficient lowering of the water quantity in a body of water could destroy all of its designated uses, be it for drinking water, recreation, navigation, or as here, as a fishery." PUD No. 1 v. Wash. Dep't of Ecology, 511 U.S. 700, 720 (1994); See also, Catskill Mountains Chapter of Trout Unlimited et al. v. City of New York, 451 F. 3d 77 (2006).

33 U.S.C. § 1314 recognizes that water pollution may be caused by "changes in the movement, flow or circulation of any navigable waters." The Clean Water Act goal to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" cannot be achieved if rivers have no flow and lakes and ponds have avoidable human induced flow alterations that impair uses and prevent attainment of water quality standards. The proposed IWL violates the Clean Water Act by excluding flow altered water bodies from the 303(d) list.

Response: MassDEP acknowledges that flow alterations can and do "impair uses and prevent attainment of water quality standards" and, as such, places waters impaired by flow alteration on the Integrated List of Waters ("Integrated List"). However, as explained in EPA's Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act (2006

Guide"), there is an important distinction in the Clean Water Act ("CWA") between waters impaired by specific chemical pollutants and those impaired by other forms of pollution.

This distinction between a "pollutant", requiring a TMDL, and "pollution", which cannot be effectively corrected through the TMDL process, is explained in section 502 of the CWA. 502(6) defines a "pollutant" to mean "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agriculture waste discharged into water." 33 U.S.C. § 1362(6). Thus, pollutants are actual physical components of water that, when present in high enough quantities to impair one or more of the water's designated uses, require a TMDL to restore the integrity of the water. Waters impaired by "pollutants" are designated as Category 5 and assigned to the 303(d) List. Such waters are restored through the calculation of TMDLs and the allocation of those pollutant loads to point and non-point sources.

By contrast, the CWA in section 502(19) defines "pollution" more broadly as any "man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water." 33 U.S.C. § 1362(19). As explained in the 2006 Guide, waters impaired by this broader definition of pollution (as opposed to specific pollutants) are properly placed in Category 4c, which is for waters that are "impaired, but the impairment is not caused by a pollutant." The 2006 Guide specifically mentions as an example of appropriate Category 4c waters "segments impaired solely due to lack of adequate flow" without an associated impairment by a pollutant.

EPA's distinction between "pollutants" and "pollution" does not constitute an unlawful interpretation of the CWA, but entails the distinction made between these two terms in section 502 of the Act itself. This distinction between Category 5 (impairment due to pollutants) and Category 4c (impairment from other causes, such as low flow) is appropriate because the strategies for restoration of a water body vary significantly depending on the nature of the impairment.

MassDEP also recognizes that reduced stream flow can result in the concentration of various solutes to levels that exceed standards and impair uses. In these instances, the waters are placed on the 303(d) List (i.e. Category 5) and TMDLs are calculated for the pollutants causing the impairment. Thus, flow-altered waters impaired by pollutants and in need of TMDLs are not excluded from the 303(d) List.

Comment: We object to the characterization of the Water Management Permitting program on page 11 of the IWL. Under the WMA, DEP is required to consider TMDLs and water quality standards in issuing WMA permits and in renewing registration statements. DEP does not, in violation of the CWA. The CWA does not limit the scope of water pollution controls that may be imposed on users who have obtained, pursuant to state law, a water allocation. §1252(g) and PUD. The IWL should make clear that DEP's WMA permitting and registration renewal decisions must be consistent with the TMDL program and the restoration plans issued thereunder. The TMDL program requires states to have plans for restoration of waters that have not attained their designated uses. CWA § 1313(e). Under § 1313(d), states and EPA are directed to identify impaired waters and take steps toward cleaning them up. DEP has a nondiscretionary duty to implement the WMA in a manner consistent with the TMDL program.

Response: This comment addresses MassDEP's implementation of its WMA Program and is not directly applicable to the subject of this public review (i.e., the 303(d) List). The WMA Program provides opportunities for public review and comment within its permit review process, and it is through that forum that the Jones River Watershed Association and others may comment on MassDEP's implementation of the WMA Program.

Comment: DEP has taken regulatory actions under the WMA in approving water withdrawals for Brockton and the Town of Hanson that are inconsistent with and undermine the Five Year "South Coastal Watershed Action Plan" and the "Taunton River Watershed Five Year Action Plan" which were funded by the MA Executive Office of Environmental Affairs (South Coastal and Taunton River Plans). The Plans set out the priority actions for improving water quality, protecting and restoring aquatic habitat and natural hydrology. In the IWL, p. 6 DEP describes "Watershed-based Monitoring, Assessment and

Implementation" as a "Key Element" of the Massachusetts Water Quality Management Program, and "[w]atershed protection has become the dominant theme of many state water quality management programs….The result is a comprehensive, integrated program that addresses all aspects of water resource management…." DEP does not conduct its water management regulatory programs in a "comprehensive, integrated" way. The South Coastal Plan contains "Water Flow Restoration Recommended Actions" page 5-26 which are undermined by DEP's regulatory decisions with regard to water withdrawals under the WMA. The Taunton River Plan contains action items for restoration of fisheries and protection of Atlantic white cedar swamp habitats, which are undermined by DEP's regulatory failures.

Response: See response 2 above.

Comment: Massachusetts' 2006 IWL improperly delisted from Category 5, §303(d) those waters impaired by flow alteration, in violation of the CWA. The 2008 proposed IWL continues this delisting. Flow altered water bodies previously listed on the 303(d) list were moved to either Category 3 (no uses assessed) or Category 4c (impairment not caused by a pollutant, i.e. impaired by flow, noxious weeds, etc.) The water bodies delisted in 2006 and proposed to be delisted in 2008 include segments of the Jones River and all of Silver Lake. The delisting of all water bodies impaired by flow alteration is improper because these waters cannot attain their designated uses or water quality standards without flow.

Response: As with response 1 above, it is important to understand the distinctions between Category 5 waters, impaired by pollutants and requiring TMDLs, and waters listed in Category 4c, which are also impaired but from other causes, such as inadequate flow. Since the Integrated List was established in 2002, waters impaired solely by low flow and/or other stressors not related to a specific pollutant have been placed in Category 4c. Such waters have not been "delisted", which may only occur as specified in EPA guidance and described in the introduction to the Integrated List of Waters.

Also, in accordance with EPA's 2006 Guide, waters "should be placed in Category 3 when there is insufficient available data and/or information to make a use support determination." It is important to note that, once listed as impaired (either by specific pollutants or more generally by pollution) waters are not moved to Category 3 due to a lack of recent data. Such waters continue to be listed as impaired until new data and information indicate that the waters are no longer impaired, or (in rare instances) that the original listing decision was in error.

Comment: In the 2006 and 2008 IWLs, Jones River segment MA 94-12-2008 (source to Wapping Road dam) is in Category 3 ("no uses assessed"). This segment of the Jones River is a Class B use under 314 CMR 4.06, which includes use as a "high quality water/warm water" fishery. The Class B uses of this segment of the River cannot be supported due to lack of flow and Brockton's discharge of pollutants over the Forge Pond dam and therefore the River should be §303(d) listed.

Response: MassDEP agrees that segment MA94-12-2008 should appear on the 303(d) List. At the time of the most recent assessment, segment MA94-12-2008 was found to be impaired by "low flow alteration, low dissolved oxygen, fish passage barrier, excess algal and aquatic plant growth and turbidity" - however, due to a clerical error, this segment was inadvertently omitted from the 2006 and 2008 303(d) lists. MA94-12-2008 will appear in Category 5 in the final version of the 2008 Integrated List.

Comment: Segment MA 94-12-2008 of the Jones River is threatened and impaired within the meaning of §303(d) as shown by "readily available data and information" as defined by 40 CFR 130.7(b)(5). This data includes: the South Coastal Watershed Water Quality Assessment, March, 2006; the ESS Report, and the Hanson Murphy Associates Report. DEP has decided to ignore this readily available data. Flow impairments to this segment of the Jones River damage habitat and cause harm to aquatic life, requiring the segment to be listed on the 303(d) list. Readily available data and information documents the nature, extent, duration, and causes of the impairment. This data and information shows that the River's lack of flow eliminates and/or reduces its ability to assimilate pollutants present in the segment.

Response: As explained in the response to the above comment, MassDEP did not ignore the data and information cited. Rather, the impairments described in the comment letter are clearly documented in MassDEP's Assessment Report on the South Shore Coastal Watersheds (March 2006). As a result, MassDEP fully intended to include this segment on the 2006 and 2008 303(d) lists. Due to a clerical error, the addition to the list was not made, and the segment incorrectly appears in Category 3 ("Unassessed") of the 2008 Proposed Integrated List of Waters. It will appear in Category 5 in the final version of the 2008 Integrated List.

Comment: Under 40 CFR 130.7(b)(5) EPA should not approve the § 303d listing because it ignores and misclassifies Jones River segment 94-12-2008. This segment was moved to Category 3 (insufficient data) and off Category 5 of the 303(d) list in the 2006 IWL and in the proposed 2008 IWL. This is an indefensible regulatory decision.

Response: EPA approved Massachusetts' 2006 303(d) List with the understanding that segment MA94-12-2008 was included on that list. This is because MassDEP's assessment report identified impairments caused by pollutants, and additional documentation summarizing changes from the 2004 to the 2006 listings, prepared by MassDEP and submitted to the EPA, indicated that this segment had been added to Category 5 (i.e., the 303(d) List). Due to a clerical error, this change was not reflected in the final 2006 Integrated List, nor was it corrected in the 2008 Proposed Integrated List of Waters. As indicated above, this will be corrected in the final version of the 2008 Integrated List.

Comment: Two additional segments (MA 94 14 2006 and 2008, and 94 13 2006 and 2008) are on the §1313(d) list in Category 5 as impaired due to organic enrichment, low dissolved oxygen, noxious aquatic plants, and turbidity. DEP's regulatory decisions regarding Brockton's WMA permit and registrations {as well as cranberry bog WMA permits} allow flow alterations and pollutant discharges that cause and contribute to the River's impairments and prevent the segments from meeting their designated uses and criteria, in violation of the CWA.

Response: See response 2 above.

Comment: Silver Lake 93143-2008 is improperly put in Category 4C for flow alteration. This categorization constitutes a regulatory decision that no TMDL is needed. Silver Lake should be on the §303(d) list for flow alteration because the Lake cannot meet its designated uses which depend upon a hydrologic regime that supports these uses. The impairment to Silver Lake from flow alterations is documented in the South Coastal Plan, 9/13/2006, pages 5-20-21. In addition, this categorization ignores pollution from the Monponsett Pond Diversion Pipe and Furnace Pond diversion via Tubbs Meadow Brook for which readily available data and information is available. (MP & FP are [303(d) listed water bodies.) Silver Lake cannot meet its water quality criteria as a Class A water, Outstanding Water Resource, without adequate flow, and therefore should be listed in the §303(d) list.

Response: According to the most recent assessment report on the South Shore Coastal Watersheds (March 2006), Silver Lake is impaired by flow alteration and, as explained in response 1 above, has been properly listed in Category 4c in accordance with EPA's 2006 Guide. Again, Category 4c indicates that Silver Lake is still impaired, but the impairment is due to low flow, as opposed to "pollutants" as defined at section 502(6) of the CWA.

Comment: Brockton's diversions of Furnace Pond cause and/or contribute to the Pond's §303(d) listing. The diversions of Monponsett and Furnace Pond reduce the Ponds' water quantity and quality, cause fluctuations in the natural hydrology, increase pollutant concentrations as a result of management decisions, and prevent attainment and maintenance of water quality standards.

Response: Furnace Pond ("Organic enrichment/low DO") and Monponsett Pond ("Nutrients", "Noxious aquatic plants", "Turbidity") are currently included on the 303(d) List (i.e., Category 5) and, therefore, will be restored through the development and implementation of TMDLs for those pollutants listed above.

Comment: Stump Brook, the outlet for Monponsett Pond is not listed on the IWL, therefore it is a Category 3, “insufficient information to make assessments for any uses.” (no uses assessed). This categorization ignores readily available information and data which shows Stump Brook is impaired for several pollutants.

Response: At the time of its most recent assessment of the South Coastal watersheds, MassDEP was unaware of any data and information pertaining to Stump Brook. Furthermore, no data and information have been submitted to the MassDEP since that time for our consideration in assessing and listing Stump Brook. Waters for which no data are available to make a use determination are placed in Category 3, in accordance with the 2006 Guide. MassDEP has established criteria for receiving and evaluating scientific data and information from outside sources, such as other state and federal agencies, universities and citizen monitoring groups. Jones River Watershed Association and others are invited to submit data pertaining to Stump Brook for use in future assessments if the following are provided: 1) an appropriate Quality Assurance Project Plan (QAPP) including a laboratory Quality Assurance/Quality Control (QA/QC) plan; 2) use of a state certified lab (certified for the applicable analyses); 3) a description of data validation and management QA/QC; and 4) all of the information is documented in a citable report that includes the QA/QC analyses.

Comment: Eel River, MA 94-23-2008 is improperly listed in Category 4c, impaired by flow alteration and exotic species Category 4c. It should be listed on the § 303(d) list because it cannot meet its water quality standards without adequate flow.

Response: As stated in response 1 above, a water body impaired by low flow or any other "pollution" that is not related to a specific "pollutant" is properly listed in Category 4c. Segment MA94-23-2008 of the Eel River is impaired by low flow and non-native species infestation. As such, it is properly listed in Category 4c, in accordance with EPA’s 2006 Guide.

Comment: Monponsett Pond’s § 303(d) listing precludes issuance of an NPDES Permit for the Hanson water treatment plant. Monponsett Pond, MA 62119-2008 (West Basin, Halifax, Hanson), is in Category 5, § 303(d) impaired for nutrients, noxious aquatic weeds, turbidity, and exotic species (listed as not a pollutant). Because Monponsett is on the §303(d) list under 40 CFR 122.4(i), EPA cannot issue a NPDES discharge permit for the Hanson Water Treatment Plant that is proposed in connection with the Hanson amended Water Management Act permit # 9P425123.01, dated April 2008.

Response: The proposed discharge permit for the Hanson Water Treatment Plant will be issued pursuant to the National Pollutant Discharge Elimination System (NPDES) which is administered jointly by the EPA and MassDEP. The NPDES Program provides opportunities for public review and comment on Draft permits before they are issued, and it is through that forum that the Jones River Watershed Association and others are invited to provide comments with regard to the NPDES permit cited above.

5) Mystic River Watershed Association

(“MyRWA appreciates the effort that MassDEP has spent assessing the Mystic River watershed and the responsiveness the Department has shown to comments prepared by MyRWA in the past. We believe that a large number of water bodies should be monitored in the next round of assessments for the Mystic watershed, including several that are not currently listed as segments. We hope that you will consider the information below and make the appropriate changes to the 2008 Integrated List.”)

Comment: MassDEP has listed Bellevue Pond, Cummings Brook, Hill’s Pond, Sales Creek, Shaker Glen Brook, Spot Pond, and Upper Mystic Lake in Category 3, “No Uses Assessed.” MyRWA recommends that these water bodies be monitored in the next round of assessments for the Mystic watershed, scheduled to occur in the summer of 2009. In particular, the Upper Mystic Lake deserves attention due to its recreational uses for boating and swimming.

Response: MassDEP will consider all of these waters when planning monitoring activities for 2009. However, MassDEP's monitoring resources are limited and must be allocated to all of the watersheds in "Year Two" of the rotating watershed management cycle. Therefore, not all waters in the Mystic Watershed will be monitored, and not all monitoring will necessarily support use assessment. For example, MassDEP's lake sampling efforts in recent years have been primarily aimed at gathering data and information to support the derivation of TMDLs or for the development of nutrient criteria, and have not always been suitable for assessing and listing waters in accordance with sections 305(b) and 303(d) of the CWA. Nonetheless, MassDEP will attempt to honor the MyRWA's request for monitoring in 2009 within the program constraints described above.

Comment: The most recent Integrated List report does not include some of the water bodies in the Mystic watershed where elevated pathogen levels have been documented. MyRWA requests that MassDEP add Horn Pond Brook, Meetinghouse Brook, Whittmore Brook, and Winter Brook to the list of segments in the Mystic River Watershed. We believe that these segments are ecologically and hydrologically significant segments of the watershed large enough to warrant listing. Table 1 **[below]** lists data collected by MyRWA (under an EPA and MassDEP-approved QAPP) indicating elevated pathogen concentrations in these water bodies, which may lead to degradation of water quality in recreationally important receiving water bodies. MyRWA recommends that these water bodies be monitored in the next round of assessments for the Mystic watershed.

Table 1. MyRWA Pathogen Data

MyRWA Site	Date	*E. coli* (MPN or cfu/100 mL)	Site Description
WIN037	10/24/2007	9677	Horn Pond Brook, large culvert near end of Sylvester Ave (Russell Brook outlet), Winchester (N42.4632 W71.1497)
WIN037	1/30/2008	1164	Horn Pond Brook, large culvert near end of Sylvester Ave (Russell Brook outlet), Winchester (N42.4632 W71.1497)
HOB063	10/24/2007	38730	Horn Pond Brook, downstream side of Sylvester Ave, Winchester (N42.4606 W71.1471)
HOB003	10/24/2007	4479	Horn Pond Brook, across from Winchester DPW yard along bike path, Winchester (N42.4592 W71.1442)
HOBWEP	10/24/2007	2318	Horn Pond Brook near outflow to Wedge Pond, sample collected from downstream side of Lake St., Winchester (N42.4569 W71.139)
HOB064	1/30/2008	252	Horn Pond Brook @ Canal St. on downstream side, Winchester (N42.46054 W71.14601)
MEB001	8/9/2006	845*	Meetinghouse Brook outlet to Mystic River, Medford (N42.4184 W71.117)
MEB001	9/13/2006	259	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	10/11/2006	31	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	11/8/2006	1850	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	12/13/2006	691	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	1/17/2007	31	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	2/21/2007	63	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	3/21/2007	41	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	4/18/2007	96	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	5/9/2007	20	Meetinghouse Brook outlet to Mystic River, Medford

MEB001	6/20/2007	156	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	7/18/2007	749	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	8/15/2007	697	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	9/12/2007	4,760	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	10/17/2007	1,310	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	11/14/2007	581	Meetinghouse Brook outlet to Mystic River, Medford
MEB001	12/19/2007	7,700	Meetinghouse Brook outlet to Mystic River, Medford
MEB002	11/28/2007	1642 (ENT)	Meetinghouse Brook upstream of Mystic Valley Parkway (N42.4193 W71.1178)
MEB002	11/13/2007	5475	Meetinghouse Brook upstream of Mystic Valley Parkway
WHITB011	7/25/2007	104,624	Whittmore Brook at Allston St, Medford (N42.4188 W71.1281)
WHITB011	9/19/2007	3,130	Whittmore Brook at Allston St, Medford
WHITB011	11/13/2007	27,550	Whittmore Brook at Allston St, Medford
WHITB011	11/28/2007	75 (ENT)	Whittmore Brook at Allston St, Medford
MEDx03	11/13/2007	11,120	Winter Brook headwaters (N42.4039 W71.1018)
WNTBR05	6/27/2007	**10462**	Winter Brook near headwaters
WNTBR04	7/25/2007	1,741	Winter Brook upstream of Mystic Ave, Medford
WNTBR03	6/27/2007	**12033**	Winter Brook downstream of Mystic Ave, Medford (N42.4049 W71.1005)
WNTBR03	7/25/2007	2,452	Winter Brook downstream of Mystic Ave, Medford
WNTBR01	6/27/2007	62	Winter Brook outlet to Mystic River, Medford
NOTE: ENT means analyte was *Enterococcus* spp. *** Average of duplicates**			

Response: MassDEP uses data of known and documented quality to make assessments provided that samples were collected under the appropriate conditions for comparison with water quality standards. For example, in order to be evaluated for the primary contact recreational use, the bacteria data must be representative of a sampling location (minimum of five sampling dates per station recommended) over the course of a single primary contact recreational season (April 1 through October 15). Of the four streams proposed for listing by the MyRWA, only Meetinghouse Brook appears to have adequate sampling coverage throughout the (2007) recreational season, but it is lacking all other critical documentation as outlined below. For these reasons the MassDEP is unable to list these waters as impaired at this time.

Data submittal guidelines and recommended content of 3rd party data reports are available directly from MassDEP's Division of Watershed Management (DWM) Office in Worcester. At a minimum, the MassDEP will accept and review data and information pertaining to the quality of Massachusetts' waters if the following are provided: 1) an appropriate Quality Assurance Project Plan including a laboratory Quality Assurance /Quality Control (QA/QC) plan, 2) use of a state certified lab (certified for the applicable analyses), 3) a description of data management, QA/QC and data validation procedures, and 4) the information is documented in a citable report that includes QA/QC analyses. Furthermore, the submittal of a complete data report with the information specified above does not guarantee that the data will automatically be used by the MassDEP for assessment and listing purposes. It simply allows MassDEP to screen the data to evaluate their quality and usefulness for making assessments. While the MyRWA does indeed have an approved QAPP, the data submittal accompanying the MyRWA's comments on the *Proposed Massachusetts Year 2008 Integrated List of Waters* does not meet the requirements outlined

above for submitting data. In fact, this submittal consists of a single data table ("Table 1") with none of the documentation needed to determine the validity and applicability of the data to the assessment process.

The MassDEP anticipates that new assessments will be initiated for the Boston Harbor watersheds (i.e., Mystic, Neponset, Weymouth & Weir) sometime late 2008 or early 2009. Because the MassDEP has performed limited monitoring in these watersheds since the preparation of the last assessment in 2002, the new assessment will rely heavily on any data of known and documented quality that can be gathered from sources other than MassDEP, such as other agencies and organizations that monitor. Waters will only be assessed, however, if sufficient data and information are available. If sufficient information is not available, MassDEP will consider collecting the necessary data next time we are scheduled to be monitoring in these watersheds (i.e., 2009).